

Date: Tuesday, 7/11/2006 12:51:44 PM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: BOLT
Job Number	: 27851		
Estimate Number	: 10372		
P.O. Number	: N/A	Part Number	: D312121
This Issue	: 7/11/2006	S.O. No.	: N/A
Prsht Rev.	: NC	Drawing Number	: D3121 REV D
First Issue	: N/A	Project Number	: N/A
Previous Run	: 27412	Drawing Revision	: D
		Material	: N/A
Written By	: <u>SKJ COMMENT: Reby</u>	Due Date	: 7/18/2006
Checked & Approved By	: <u>SKJ 06.07.11</u>	Qty:	30 Um: Each
Comment	: Est. A04.02.09 New issue KJ/DS		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description:
---------	-----------------------	--------------

1.0	M303H0500	303 HEX BAR
-----	-----------	-------------



Comment: Qty.: 0.0417 f(s)/Unit Total: 1.2510 f(s)

303 HEX BAR

Material: AISI 303 SS 1/2" Hex Bar

(M303H0.500)

Batch: M100 473

06/08/02

2.0	HARDINGE	HARDINGE CNC LATHE SMALL
-----	----------	--------------------------



Comment: HARDINGE CNC LATHE SMALL

1-Turn D3121-21

2-Identify as D3121-21

3-Deburr break all sharp edges 0.005" to 0.010"

06/08/03

34

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	----------------------------------------



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

06/08/03

34

4.0	QC8	SECOND CHECK
-----	-----	--------------



Comment: SECOND CHECK

J.G

06/08/04

34

5.0	PACKAGING 1	PACKAGING RESOURCE #1
-----	-------------	-----------------------



Comment: PACKAGING RESOURCE #1

Identify and Stock


Location: S1409

06/08/04

(34)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA:  Date: 06/08/09

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Date: Tuesday, 7/11/2006 12:51:44 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BOLT

Job Number: 27851

Part Number: D312121

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

DC

DOCUMENT CONTROL



(34)

Comment: DOCUMENT CONTROL  
Inspection Level 21

06/08/09

Job Completion



C208109104

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries


QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

DART AEROSPACE LTD	Work Order:	27851
Description: BOLT	Part Number:	D3121-21
Inspection Dwg: D3121 Rev: D	Page 1 of 1	

## FIRST ARTICLE INSPECTION CHECKLIST

X	First Article	X	Prototype
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[illegible]

Measured by:		Audited by:	J.F.	Prototype Approval:	N/A.
Date:	06/08/03	Date:	06/08/03	Date:	

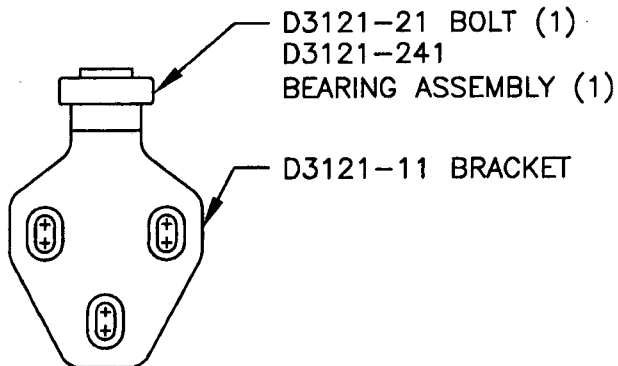
Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	



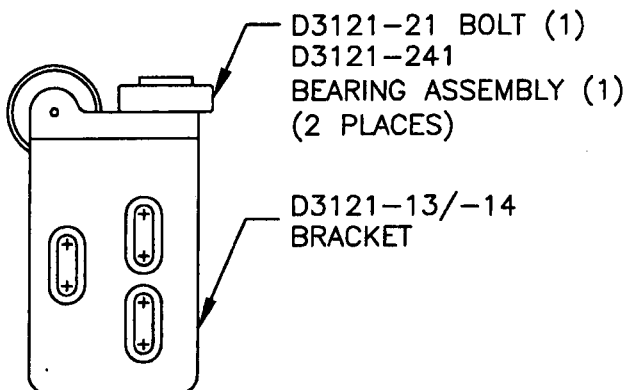
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		HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. D
		D3121	SHEET 1 OF 10
DATE		TITLE	SCALE
06.05.17		BRACKET ASSEMBLY	1:2
A	02.04.15	NEW ISSUE	
B	03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146	
C	04.02.17	ADD CLEARANCE; USE -241 BEARING	
D	06.05.17	D3121-25 CAP WAS 1.024, NOW 1.000	

RELEASED

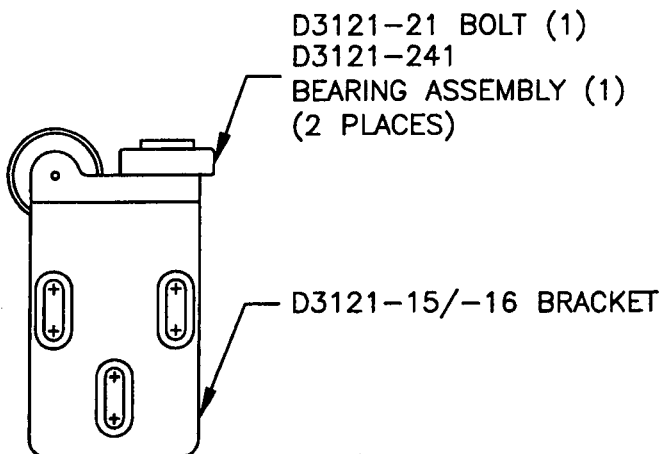
06.06.02



**D3121-041 BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-33)



**D3121-043 (SHOWN) / D3121-044 (OPPOSITE) BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-37/-38)



**D3121-045 (SHOWN) / D3121-046 (OPPOSITE) BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-35/-36)

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CHECKED J.H.	APPROVED H	DRAWING NO. D3121	REV. D SHEET 2 OF 10
DATE 06.05.17	TITLE BRACKET ASSEMBLY		SCALE 1:2

D3121-21 BOLT (1)  
D3121-241  
BEARING ASSEMBLY (1)

**D3121-141 BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23001-01)

**RELEASED**

06.06.02 H

D3121-111 BRACKET

D3121-21 BOLT (1)  
D3121-241 BEARING ASSEMBLY (1)  
(2 PLACES)

D3121-113/-114 BRACKET

**D3121-143 (SHOWN) / D3121-144 (OPPOSITE)**  
**BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-03/-04)

D3121-21 BOLT (1)  
D3121-241 BEARING ASSEMBLY (1)  
(2 PLACES)

**D3121-145 (SHOWN) / D3121-146 (OPPOSITE)**  
**BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-05/-06)

D3121-115/-116  
BRACKET

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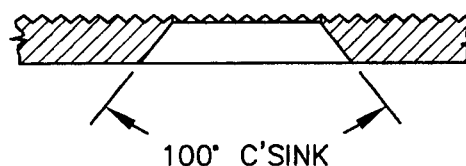
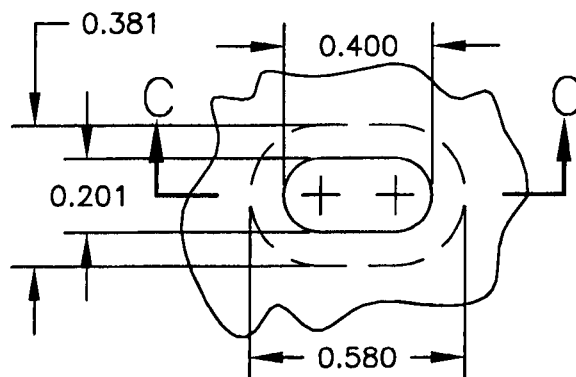
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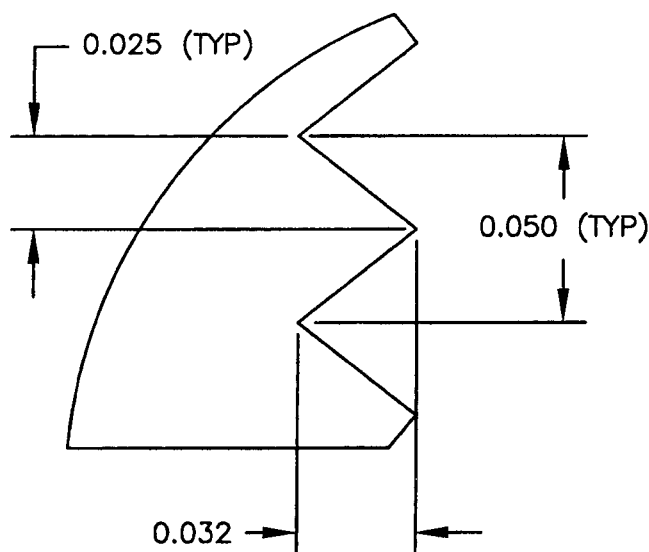
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DATE 06.05.17		TITLE BRACKET ASSEMBLY	SCALE 1:1

**DETAIL A:**  
**SLOT DETAIL**  
SCALE 2:1  
VIEW ROTATED



**SECTION**  
**C-C**

**DETAIL B:**  
**RIDGE DETAIL**  
PARTIAL SECTION  
SCALE 1:20



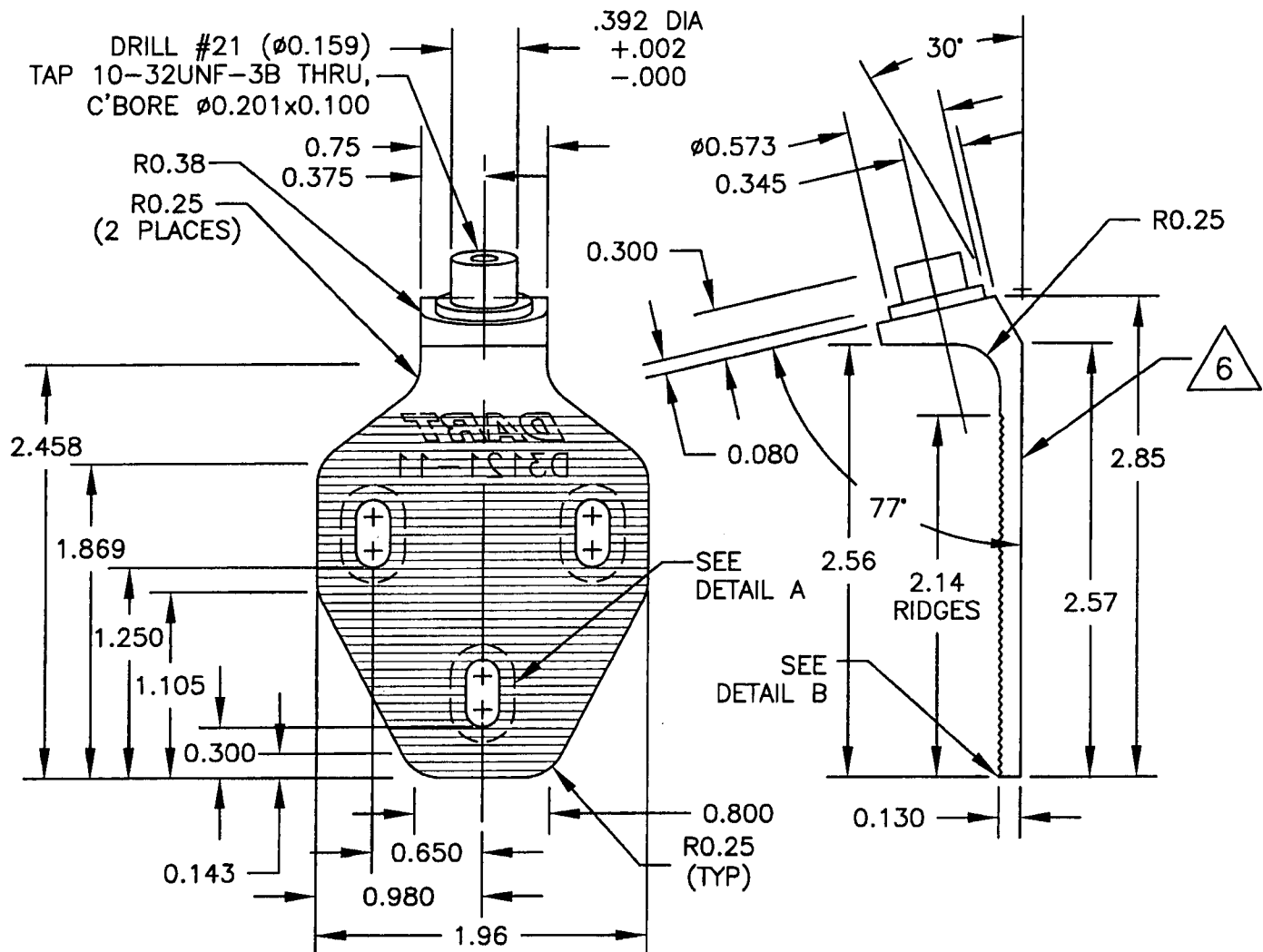
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DATE 06.05.17	TITLE BRACKET ASSEMBLY		SCALE 1:1

**D3121-11 BRACKET**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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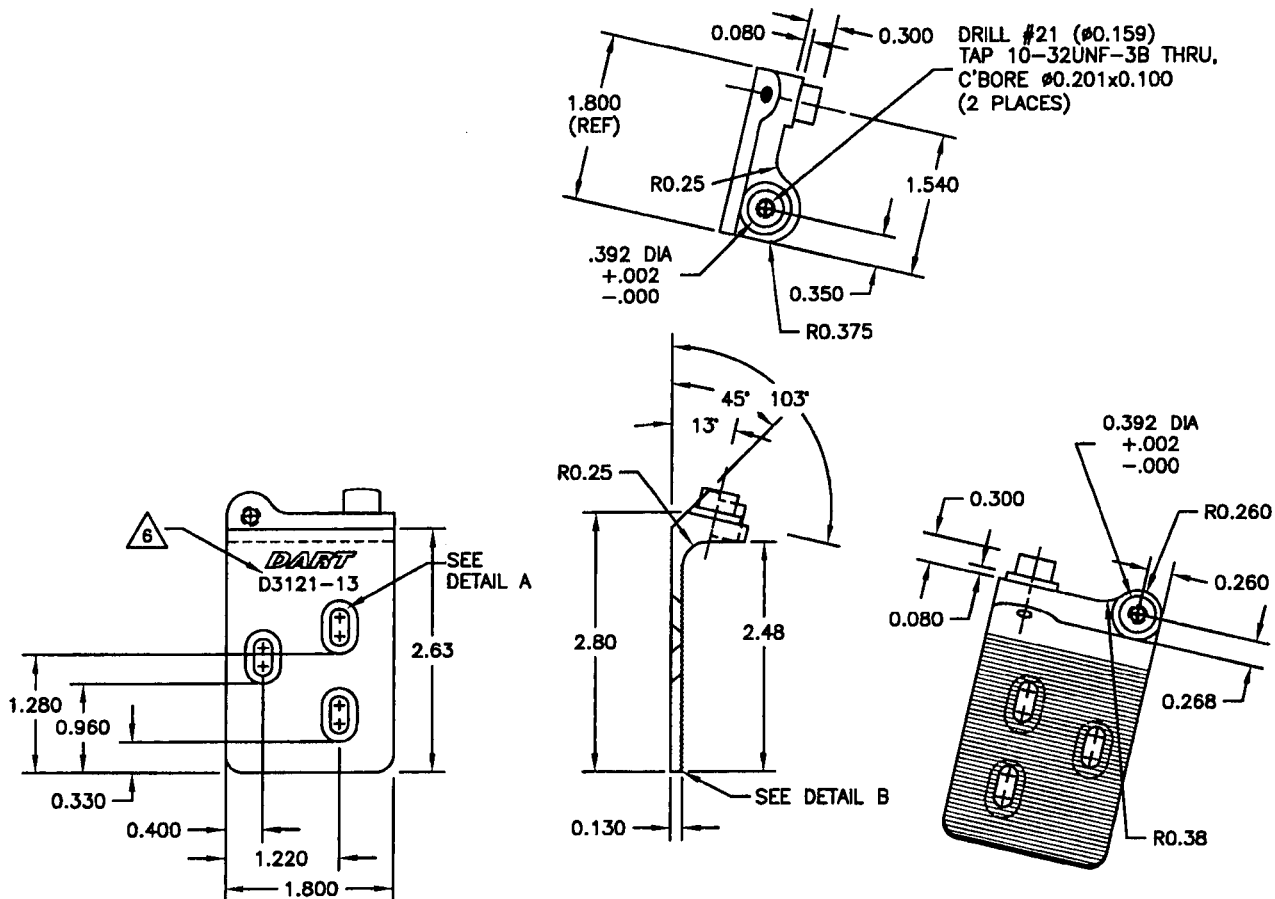
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DATE 06.05.17	TITLE BRACKET ASSEMBLY		SCALE 1:2



**D3121-13 BRACKET (SHOWN)**  
**D3121-14 BRACKET (OPPOSITE)**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE STRENGTH = 150 ksi  
MIN YIELD TENSILE STRENGTH = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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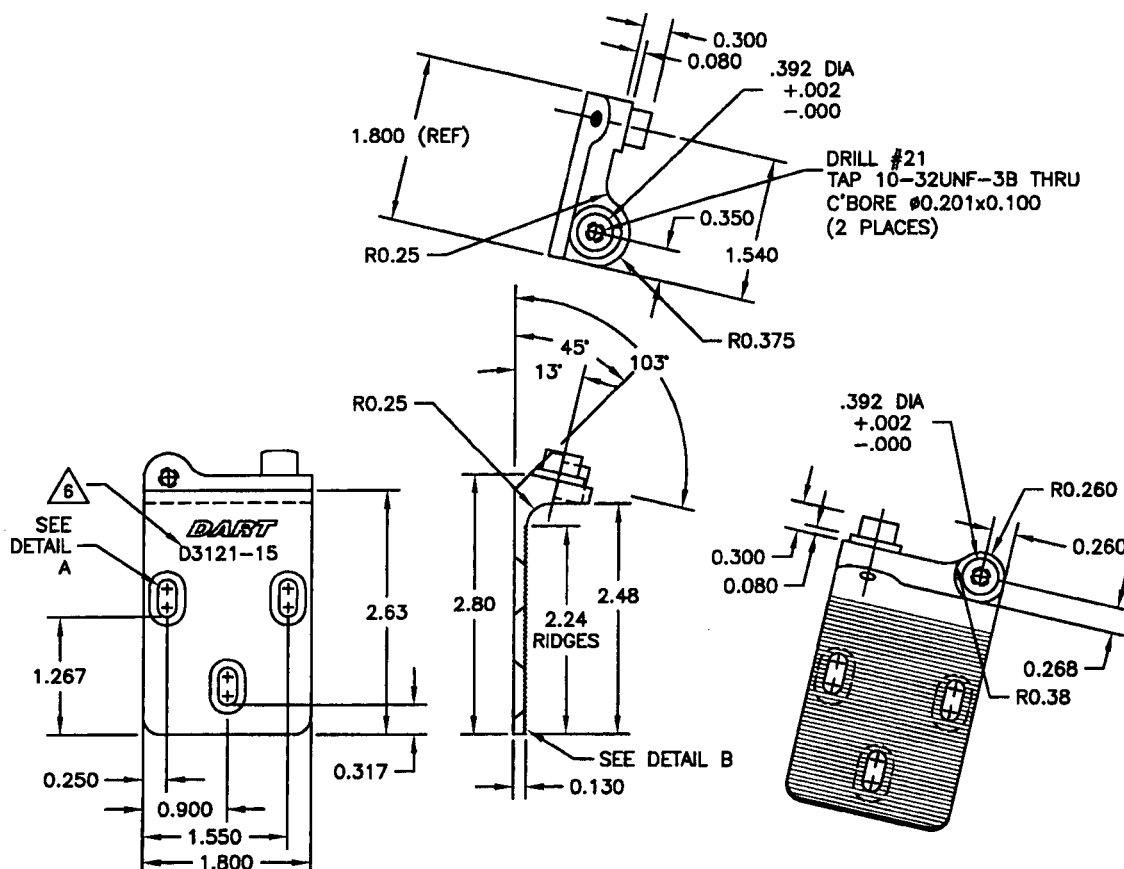
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DATE 06.05.17	TITLE BRACKET ASSEMBLY		SCALE 1:2



**D3121-15 BRACKET (SHOWN)**  
**D3121-16 BRACKET (OPPOSITE)**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

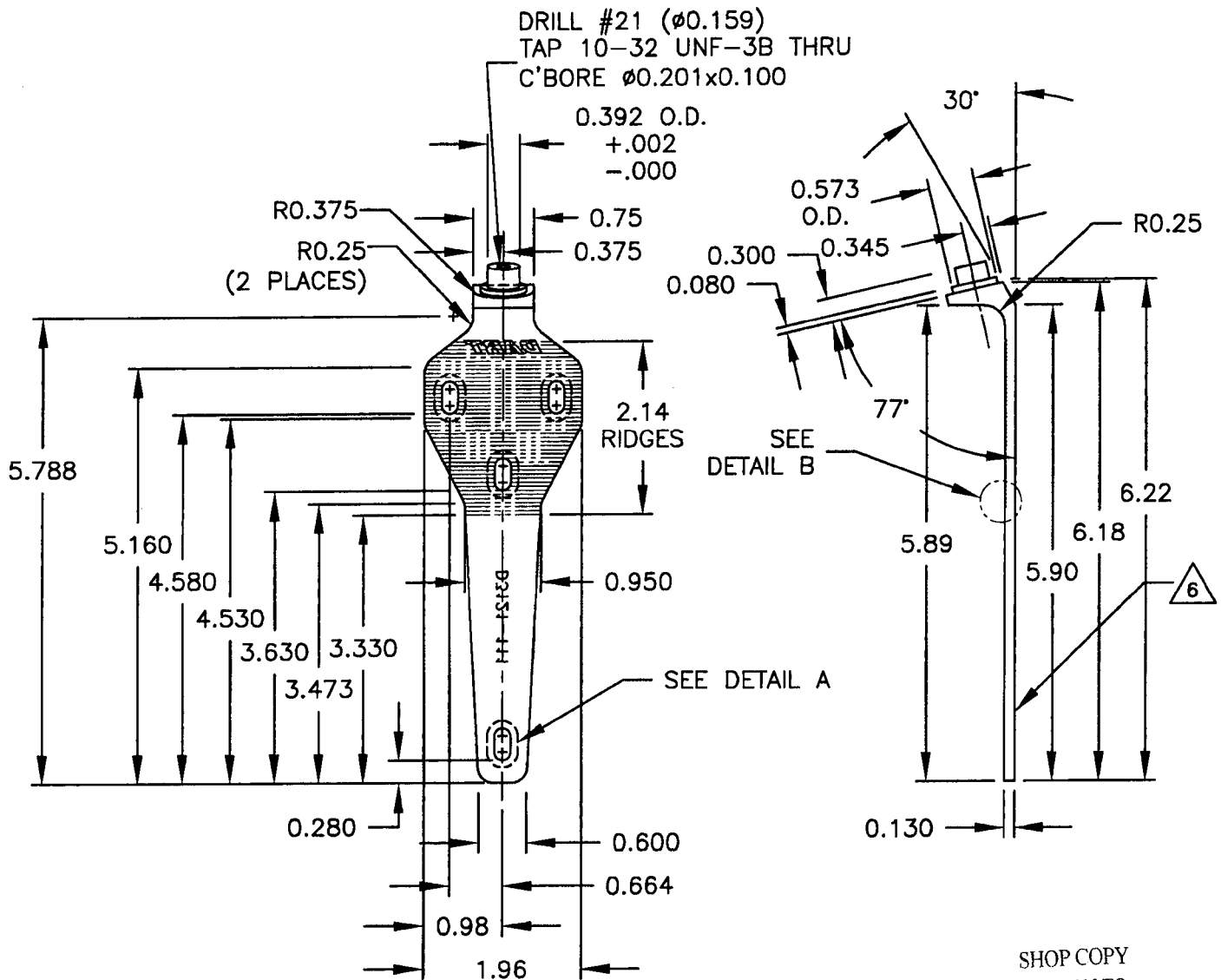
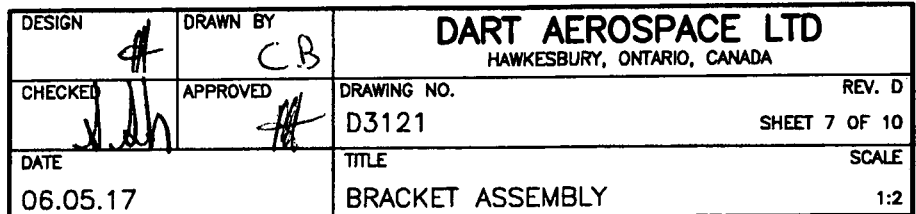
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- 1) REPLACES PREMIER P/N B32-23001-11
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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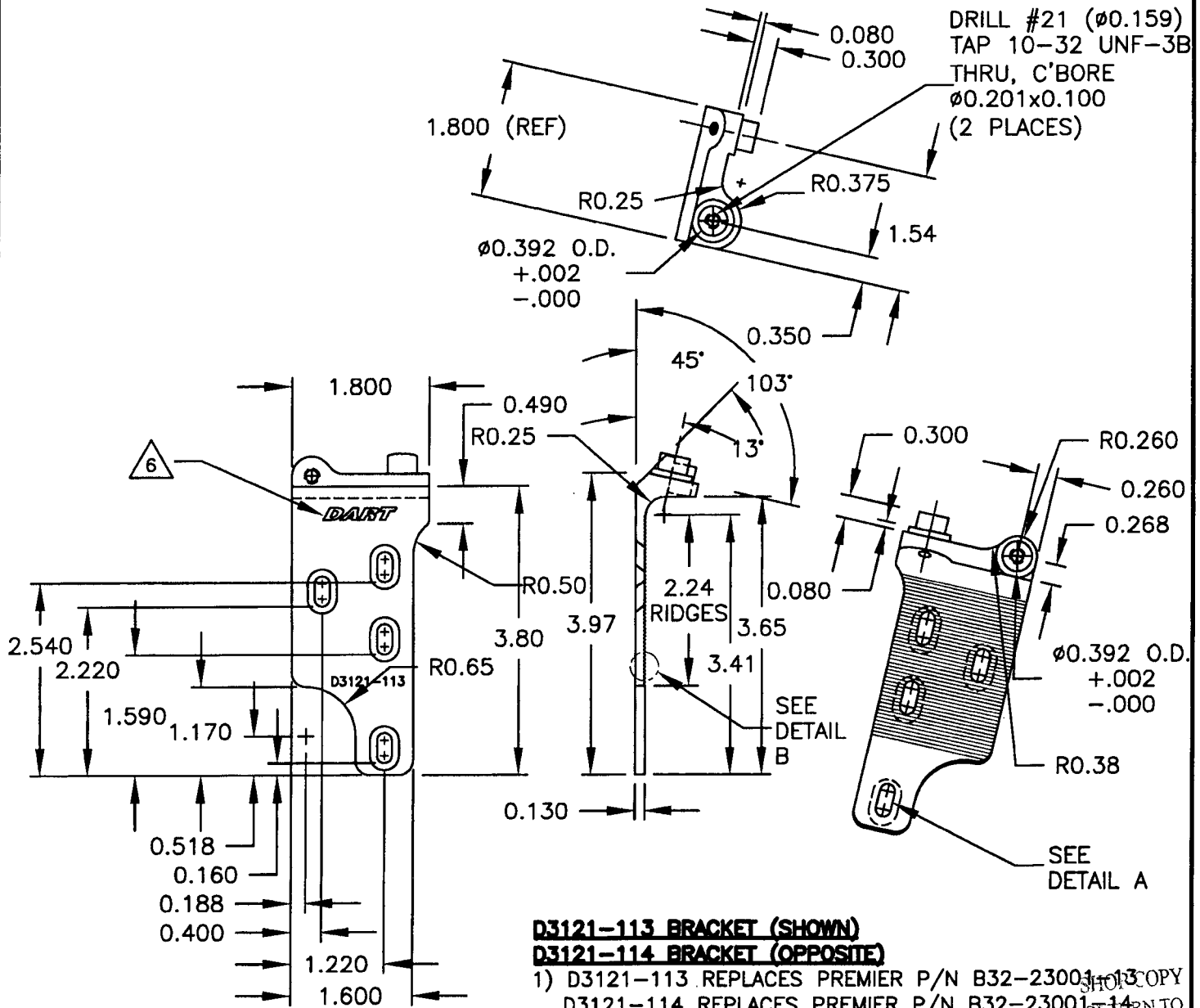
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CHECKED #	APPROVED #	DRAWING NO. D3121	REV. D SHEET 8 OF 10
DATE 06.05.17		TITLE BRACKET ASSEMBLY	SCALE 1:2

**D3121-113 BRACKET (SHOWN)****D3121-114 BRACKET (OPPOSITE)**

- 1) D3121-113 REPLACES PREMIER P/N B32-23001-113  
D3121-114 REPLACES PREMIER P/N B32-23001-114

- 2) MATERIAL: 17-4 SS PER AMS 5604/5643

(REF DART SPEC. M17-4-B)

MIN ULTIMATE TENSILE STRENGTH = 150 ksi

MIN YIELD TENSILE STRENGTH = 100 ksi

- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

- 4) ALL DIMENSIONS ARE IN INCHES

- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN

- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

**RELEASE**

06.06.02 #

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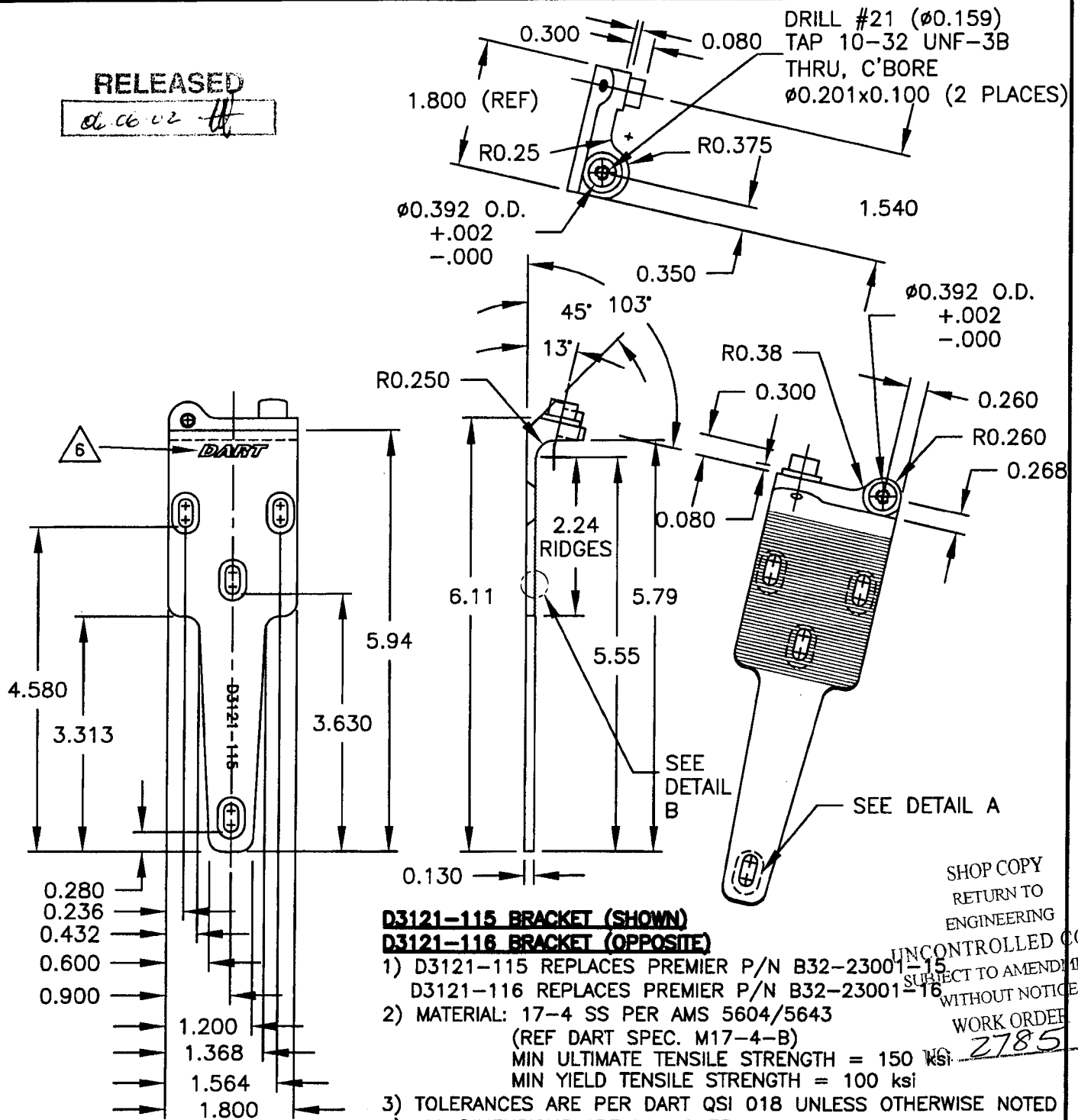
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DATE 04.02.18	TITLE BRACKET ASSEMBLY		SCALE 1:2

RELEASED

06.06.02 J.H.

**D3121-115 BRACKET (SHOWN)****D3121-116 BRACKET (OPPOSITE)**

- 1) D3121-115 REPLACES PREMIER P/N B32-23001-15  
D3121-116 REPLACES PREMIER P/N B32-23001-16
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE STRENGTH = 150 ksi  
MIN YIELD TENSILE STRENGTH = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

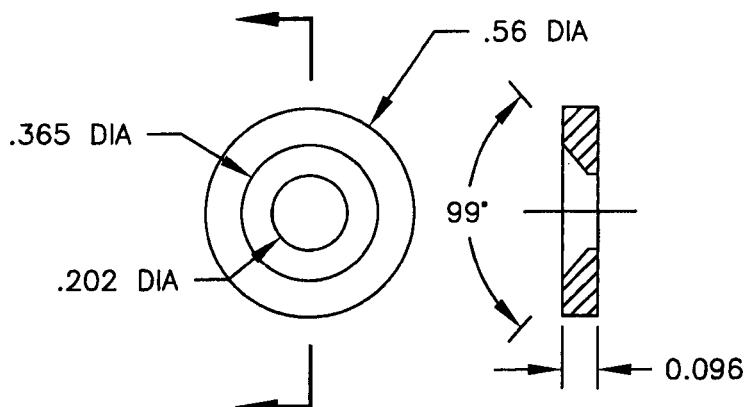
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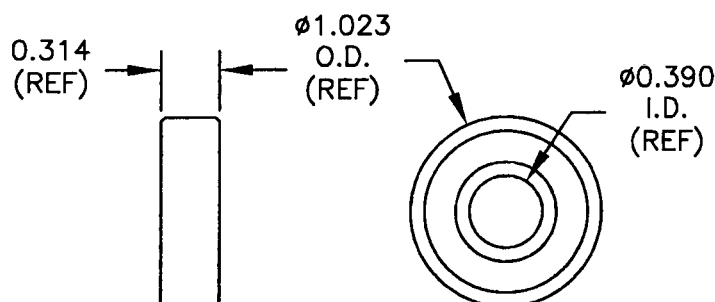
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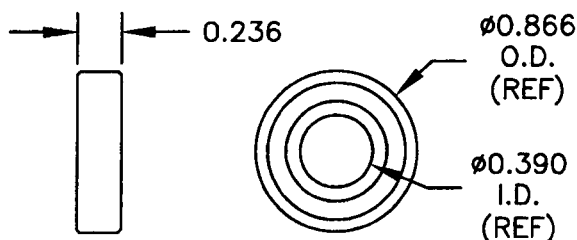
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CHECKED J.H.	APPROVED J.H.	DRAWING NO. D3121	REV. D SHEET 10 OF 10
DATE 06.05.17		TITLE BRACKET ASSEMBLY	SCALE 1:1

**D3121-17 WASHER (SCALE 2:1)**

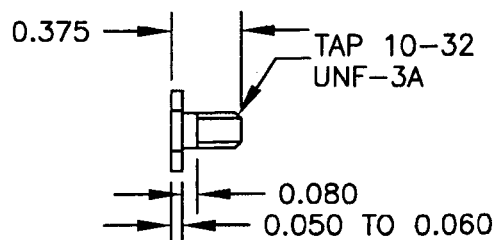
- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-19 BEARING (SCALE 1:1)**

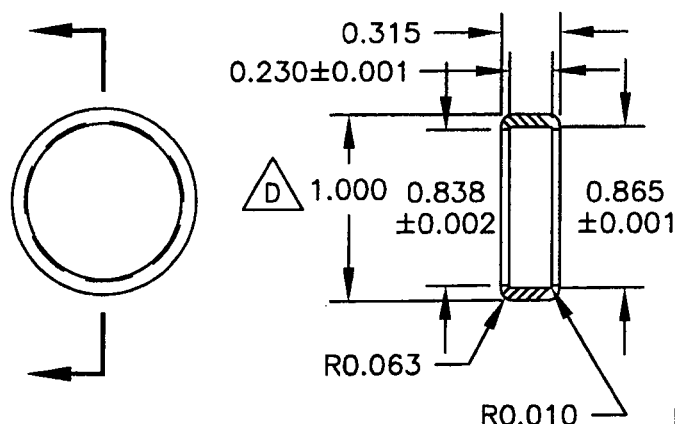
- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-23 BEARING (SCALE 1:1)**

- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z OR KML P/N 6900-ZZ
- 2) ALL DIMENSIONS ARE IN INCHES

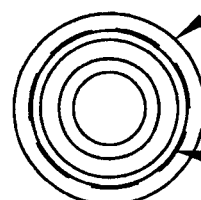
**D3121-21 BOLT (SCALE 1:1)**

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-25 CAP (SCALE 1:1)**

- 1) MATERIAL: DELRIN ROD, 1.25 (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

RELEASED  
06-06-02

**D3121-241 BEARING ASSEMBLY (SCALE 1:1)**

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D3121-23  
BEARING

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